

Amendments to the Claims:

Following is a complete listing of the claims pending in the application, as amended:

1. (Currently Amended) A method of reporting T-wave alternan values, comprising:

obtaining T-wave alternan values corresponding to alternans at relative common respective time intervals of a plurality of T-wave segments obtained from a physiological signal representative of a patient's heartbeat by differencing adjacent T-wave segments such that polarity and morphology information from the physiological signal are retained in the T-wave alternan values; and

displaying a representation of a plurality of the T-wave alternan values at the relative common respective time intervals of the T-wave segments.

2. (Currently Amended) The method of claim 1 wherein displaying a representation of the T-wave alternan values comprises generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative-time intervals for selected heart rates.

3. (Currently Amended) The method of claim 2 wherein generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative-time intervals comprises generating a plot of the T-wave alternan values versus T-wave segment time.

4. (Currently Amended) The method of claim 2 wherein generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative-time intervals comprises color coding relative amplitudes of T-wave alternan values and displaying colors corresponding to the relative amplitudes of the T-wave alternan values at the common respective relative-time intervals.

5. (Cancelled)

6. (Original) The method of claim 4 wherein white is assigned to a T-wave alternan value having an amplitude less than a standard deviation for the T-wave alternan values.

7. (Currently Amended) The method of claim 2 wherein generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative time intervals comprises (a) generating a plot of the T-wave alternan values versus T-wave segment time and (b) color coding relative amplitudes of T-wave alternan values and displaying colors corresponding to the relative amplitudes of the T-wave alternan values at the common respective relative time intervals.

8. (Original) The method of claim 7 wherein white is assigned to a T-wave alternan value having an amplitude less than a standard deviation for the T-wave alternan values.

9. (Original) The method of claim 1, further comprising displaying a plot of a waveform indicative of a heartbeat associated with the T-wave alternan values.

10. (Currently Amended) The method of claim 1 wherein the physiological signal is from a lead and displaying a representation of a plurality of the T-wave alternan values comprises providing a plurality of ~~frames defined by time~~ periods of a stress test, and wherein each frame time period has a graphical representation of the T-wave alternan values for a plurality of T-wave segments ~~during the corresponding time period of the frame~~.

11. (Currently Amended) A method of reporting T-wave alternan values, comprising:

obtaining T-wave alternan values corresponding to alternans at common respective relative time intervals of a plurality of T-wave segments obtained from a physiological signal representative of a patient's

heartbeat, the physiological signal being measured by a plurality of leads, and the T-wave alternan values being obtained by differencing adjacent T-wave segments such that polarity and morphology information from the physiological signal are retained in the T-wave alternan values; and displaying a representation of a plurality of the T-wave alternan values at the common respective relative time intervals of the T-wave segments.

12. (Currently Amended) The method of claim 11 wherein displaying a representation of the T-wave alternan values comprises providing a plurality of frames for each lead defined by time periods of a stress test for each lead, and wherein each frame time period has a graphical representation of the T-wave alternan values for a plurality of T-wave segments during the corresponding time period of the frame.

13. (Currently Amended) The method of claim 12 wherein displaying a representation of the T-wave alternan values further comprises generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative time intervals for selected heart rates.

14. (Currently Amended) The method of claim 13 wherein generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative time intervals comprises generating a plot of the T-wave alternan values versus T-wave segment time.

15. (Currently Amended) The method of claim 13 wherein generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative time intervals comprises color coding relative amplitudes of T-wave alternan values and displaying colors corresponding to the relative amplitudes of the T-wave alternan values at the common respective relative time intervals.

16. (Cancelled)

17. (Original) The method of claim 15 wherein white is assigned to a T-wave alternan value having an amplitude less than a standard deviation for the T-wave alternan values.

18. (Currently Amended) The method of claim 13 wherein generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative-time intervals comprises (a) generating a plot of the T-wave alternan values versus T-wave segment time and (b) color coding relative amplitudes of T-wave alternan values and displaying colors corresponding to the relative amplitudes of the T-wave alternan values at the common respective relative-time intervals.

19. (Original) The method of claim 18 wherein white is assigned to a T-wave alternan value having an amplitude less than a standard deviation for the T-wave alternan values.

20. (Original) The method of claim 11, further comprising displaying a plot of a waveform indicative of a heartbeat associated with the T-wave alternan values.

21. (Currently Amended) A method of reporting T-wave alternan values, comprising:

identifying T-wave segments of a physiological signal having substantially repeating waveforms representative of a patient's heartbeat;

computing differences at common respective relative-time intervals of selected T-wave segments to provide preliminary alternan waveformsestimates by differencing adjacent T-wave segments such that polarity and morphology information from the physiological signal are retained in the T-wave alternan values;

ascertaining median estimates of alternans over periods containing a plurality of heartbeats a reference waveform from the preliminary alternan estimateswaveforms;

determining a final alternan waveform based on smoothed alternan estimates derived from the preliminary alternan waveforms and estimates by

weighting the smoothed alternan estimates based on the reference waveform ~~median~~ estimates of alternans, the final alternan waveform defining T-wave alternan values corresponding to alternans at common respective relative-time intervals in the T-wave segments; and displaying a representation of a plurality of the T-wave alternan values at the common respective relative-time intervals of the T-wave segments.

22. (Currently Amended) The method of claim 21 wherein displaying a representation of the T-wave alternan values comprises generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative-time intervals for selected heart rates.

23. (Currently Amended) The method of claim 22 wherein generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative-time intervals comprises generating a plot of the T-wave alternan values versus T-wave segment time.

24. (Currently Amended) The method of claim 22 wherein generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative-time intervals comprises color coding relative amplitudes of T-wave alternan values and displaying colors corresponding to the relative amplitudes of the T-wave alternan values at the common respective relative-time intervals.

25. (Cancelled)

26. (Original) The method of claim 24 wherein white is assigned to a T-wave alternan value having an amplitude less than a standard deviation for the T-wave alternan values.

27. (Currently Amended) The method of claim 22 wherein generating a graphic display related to the amplitude of the T-wave alternan values at the common respective relative-time intervals comprises (a) generating a plot of the T-wave alternan

values versus T-wave segment time and (b) color coding relative amplitudes of T-wave alternan values and displaying colors corresponding to the relative amplitudes of the T-wave alternan values at the common respective relative-time intervals.

28. (Original) The method of claim 27 wherein white is assigned to a T-wave alternan value having an amplitude less than a standard deviation for the T-wave alternan values.

29. (Original) The method of claim 21, further comprising displaying a plot of a waveform indicative of a heartbeat associated with the T-wave alternan values.

30. (Currently Amended) The method of claim 21 wherein the physiological signal is from a lead and displaying a representation of a plurality of the T-wave alternan values comprises providing a plurality of ~~frames defined by time periods of a stress test, and wherein each frame~~ time period has a graphical representation of the T-wave alternan values for a plurality of T-wave segments ~~during the corresponding time period of the frame~~.